

AMENDMENTS TO THE SPECIFICATION

Page 3, paragraph 3,

For example, when the compression stress of about 200 MPa is applied for the multilayer film 22 with a 0.3 [-] μm thickness on a quartz substrate having a 6 inch square and a 6.35 mm thickness, warping (deformation) on the order of 500 nm inevitably takes place for an area of 140 [5] \times 140 mm.

Page 3, paragraph 7

This invention is made under the above-discussed background. It is therefore an object of this invention to provide a substrate with a multilayer film, a reflection type mask blank for exposure, and a reflection type mask for exposure which has a surface of a multilayer film with high flatness by correcting warping (deformation) of the surface of the multilayer film formed by stress of the multilayer film and the warping (deformation) of the substrate itself.

Page 4, paragraph 5,

In this event, a measured value within a area of 140 [5] \times 140 mm is defined as the flatness according to this invention. For example, it is a measured value within the area of 140 [5] \times 140 mm with respect to a center of a 6 inch substrate.

Page 14, paragraph 14,

In the case of the multilayer film made of Mo and Si, a Si film is initially deposited under Ar gas atmosphere using a Si target by the use of the DC magnetron sputter method. Thereafter, a Mo film is deposited under Ar gas atmosphere using a Mo target. By using this process as one period, the lamination is carried out with 30~60 periods, preferably 40 period. Finally, the Si film is deposited. For example, the stress of the multilayer film 12 was -500 MPa in a 0.2 [-] μm thickness. Through such a step, the substrate with the multilayer film can be obtained.

Page 15, paragraph 5,

The EUV mask can be manufactured by forming the pattern on the absorber layer of the thus-obtained EUV mask blank. The EB resist is applied on the EUV mask blank obtained in the step (5), and is baked at 200 [-] $^{\circ}\text{C}$.

Page 15, paragraph 7,

The EUV absorber layer 14 is dry-etched with chlorine at substrate temperature of 20 [-] °C by using the above resist pattern as the mask by the use of an ICP-RIE apparatus to thereby pattern the absorber layer. Under this condition, the SiO₂ serving as a base layer is removed by the use of dilute hydrofluoric acid solution. Further, the resist, which [is remained] remains on the absorber layer pattern, is removed by the use of hot strong sulfuric acid at 100 [-] °C. Through such a step, the EUV mask can be obtained.

Page 18, paragraph 2,

For example, in the case where the stress correction film 16 has the film thickness of 0.28 [-] μm and the stress of -500 MPa, if the film is thinned to half (0.14 [-] μm), the material will be selected such that the stress becomes twice (-1000 MPa).

Page 19, paragraph 6,

The TaB film (Ta: B=75:15(at%)) was deposited on the surface of the glass substrate 11 as the stress correction film 15. The TaB film was formed to a thickness of 0.28 [-] μm at the room temperature under Ar gas pressure of 0.6Pa by the use of the DC magnetron sputter method.